REMARKS

The amendment of claims 1 and 2 to recite an "anodized film-containing" aluminum alloy, is supported for example on page 5, line 10, page 7, lines 13 and 19, page 8, lines 4 and 13, and page 9, lines 2, 21 and 24, of the specification.

The amendment of claims 1-4 regarding the composition of the alloy is supported in the specification from page 5, line 16 to page 9 line 19, which show the signification of the presence of magnesium and optionally titanium having weight percentages within the recited ranges, in applicants' high purity aluminum, and Figures 1 and 5 which disclose the presence of undesirable "impure" elements in the claimed high purity aluminum in small enough amounts so that they do not materially affect the basic and novel characteristics of the claimed invention. Thus, the disclosure including the specification and original claims 1-4 is fully supportive of the use of the transitional clause "consisting essentially" to exclude from the high purity aluminum of the amended claims elements who do materially affect the basic and novel characteristics of the claimed invention.

Reconsideration of the application, as amended is respectfully requested.

Claims 1-4 have been rejected under 35 U.S.C. 112, second paragraph, as being indefinite as to whether the claims should be "open" or "closed" with regard the composition of the alloy. It is believed that this rejection has been overcome

by the amendment of the claims to recite the use of an alloy "consisting essentially" of the recited components.

Claim 1 has been rejected under 35 U.S.C. 102(b) as being anticipated by Hasegawa et al. (US 5,988,262) which teaches a sputtering target of a single crystal aluminum alloy comprising aluminum having a purity of 99.9 wt % and any of 24 other metals, including magnesium which is present in an amount of 0.1 to 3.0 wt %. However, claim 1 has now been amended to recite that the alloy is in the form of an anodized film containing product which limits the claimed alloy to a very specific use. Since such use is nowhere suggested in the disclosure of Hasegawa et al., the rejection based on anticipation is believed not to be applicable to claim 1 as amended and should be withdrawn.

Claims 1 and 3 have been rejected under 35 U.S.C. 102(b) as being anticipated by Hasuo et al. (JP 10-088271) which teaches an anodized aluminum alloy comprising aluminum of 99.9 wt % purity to which has been added 0.2-1.0 % of silicon and 0.35-2.5% of magnesium to produce an anodized aluminum film free from cracking. Note that the presence of silicon within the range of 0.2-1.0% of the alloy required by Hasuo et al., would form Mg_2Si which would precipitate and thus materially affect the basic and novel characteristics of the claimed invention as described in the discussion of the Hasuo et al. disclosure on page 3, line 13 to page 4 line 8 of applicants' specification. It is there pointed out that the

precipitated Mg_2Si, which increases the strength of the high purity aluminum, also forms our gaps which render the film susceptible to spallation during plasma irradiation. Therefore the presence of 0.2-1.0% of silicon necessary in the reference is clearly excluded by the "consisting essentially" transition phrase of claims 1 and 3. This rejection of claims 1 and 3 as anticipated under 35 U.S.C. 102(a) is therefore believed to be overcome by the foregoing amendment and should also be withdrawn.

Claims 1-4 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Thach et al. (US 6,659,331), which teaches aluminum alloy articles having an anodized aluminum coating which exhibits improved performance when exposed to a corrosive plasma environment.

Applicants' claims as amended recite anodized alloys "consisting essentially" of aluminum having a purity 99.9 wt % or greater, 2.0 to 3.5 wt % of magnesium and optionally 0.004 to 0.01 wt % titanium. The claims thus exclude alloys containing over 0.1 wt % of metals other than Al, Ti, and Mg (100 minus 99.9 wt % of Al in the high purity aluminum) since the presence of these metals, considered impurities in applicants' invention, would materially affect the basic and novel characteristics of the claimed invention. In contrast, a major proportion of the categories of alloys disclosed by Thach et al. from column 3, line 44 to column 4, line 12 contains metals other than Al, Mg and Ti in an amount considerable

greater than 0.1 wt %. Furthermore, applicants claimed alloys are not obvious under 35 U.S.C. 103 since there is nothing in the disclosure of Thach et al which would cause a person having ordinary skill in the art to obtain specifically applicants' claimed alloys. This conclusion is further supported by the unobvious results obtained with applicants claimed alloys when exposed to plasma radiation, namely, the substantially reduced corrosion areas obtained with applicants' alloy as compared with commercial aluminum alloys (5000 and 6000 series) commonly used for articles exposed to plasmas, as shown in Figure 2 and its explanation on pages 9, and 11-13 of applicants' specification, the reduced cracks obtained with applicants' claimed Al alloy as compared with commercial Al alloys as shown in Figure 3 and its explanation on pages 10, 13 and 14 of applicants' specification and finally the reduced thickness of the anodized film of applicants' claimed alloy as compared with commercial Al alloys as shown in Figure 4 and its explanation on pages 10, 14 and 15 of applicants' specification.

The application is now thought to be in condition for allowance and such action at an early date is earnestly solicited. Please charge any deficiency or credit any overpayment to Deposit Account No. 10-1250.

Respectfully submitted,

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